

REMARKS

In the present Amendment, claims 6, 7, 9, 10 and 11 have been amended to correct multiple dependencies considered improper under U.S. practice.

Claim 1 has been amended to recite the claimed method with a proper transitional phrase between the preamble and the body of the claim (i.e., "comprising the steps of . . ."); to recite the method in a more positive fashion; to specify that the stirring in the post-heat treatment stirring and cooling step is either mechanical stirring or stirring by vibration; and to specify that the air flow in the stirring/cooling step is a forced air flow. Section 112 support for the amendments may be found, for example, in the first full paragraph on page 20, the paragraph bridging pages 20-21, and the first full paragraph on page 21 of the specification.

Independent claim 2 has been amended in a manner similar to claim 1. Support is the same as for the amendments to claim 1.

Claim 3 has been amended to clarify that it is the treated water-absorbing resin powder which is produced at a rate of 300 kg/hr or more. Support may be found, for example, at page 30, last full paragraph of the specification.

Claim 5 has been amended to be a dependent claim, depending from claim 1.

Claims 12-17, which depend directly or indirectly from claim 1, have been added. Section 112 support for claims 12-17 is the same as for the amendments to claim 1. For claim 17, see also the second full paragraph on page 21 of the specification.

No new matter has been added and entry of the amendments is respectfully requested. Upon entry of the amendments, claims 1-17 will be pending.

At page 2 of the Action, claims 6-11 are objected to as being in improper multiple dependent form.

As noted, the claims have been amended to address the multiple dependencies considered improper under U.S. practice.

Reconsideration and withdrawal of the objection are respectfully requested. The Examiner is requested to examine claims 6-11 on the merits.

At page 2 of the Action, claim 3 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Specifically, the Examiner asserts that “the treatment amount” lacks antecedent basis and is otherwise indefinite.

Claim 3 has been amended to address the Examiner’s concerns. Reconsideration and withdrawal of the rejection are respectfully requested.

At page 3 of the Action, claim 1 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Brehm et al (U.S. Patent 5,672,633).

Applicants submit that this rejection should be withdrawn because Brehm et al does not disclose or render obvious the surface crosslinking treatment method for a water-absorbing resin powder of present claim 1.

As recited in claim 1, the present invention relates to a surface crosslinking treatment method for a water-absorbing resin powder. The method includes the steps of:

- Adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder;

- Heat treating the mixture;
- And, after the heat treatment, stirring the water-absorbing resin powder mechanically or by vibration, and cooling it under a forced air flow.

Brehm et al discloses a method of producing powdery crosslinked polymers absorbing water, aqueous or serous liquids (Abstract). In Example 1 of Brehm et al, a polyacrylic acid obtained by polymerization in solution, cross-linked with triallylamine and present as a sodium salt neutralized to the extent of 70 mol% was post-treated with a 50% ethylene carbonate solution to provide Comparative polymer A. Comparative polymer A was then continuously fed into a paddle mixer and mixed with a 50% ethylene carbonate solution, and the mixture was heated in a dryer equipped with disk-shaped rotating mixing elements and subsequently cooled with air in a fluidized bed (col. 7, line 35-col. 8, line 5).

Brehm et al describes that the surface-cross-linking treatment may be performed repeatedly and that the surface-cross-linking compounds include alkylene carbonates (col. 5, lines 38-45).

In the presently claimed invention, the water-absorbing resin powder after the heat treatment is stirred and cooled under an air flow. As described at page 27, 1st full paragraph of the present specification, the term “under an air flow” as used in the present application refers to forced ventilation of the cooling machine. To clarify the invention, claim 1 has been amended to recite that the powder is cooled under a forced air flow. Further, claim 1 has been amended to specify that the stirring in the post-heat treatment stirring and cooling step is mechanical stirring or stirring by vibration.

As noted, Brehm et al merely discloses that the mixture is cooled in air in a fluidized bed. Brehm et al does not disclose or render obvious the method of present claim 1, for at least the reason that Brehm et al does not disclose or suggest that the cooling step be a cooling/stirring step which involves both cooling under a forced airflow and either mechanical stirring or stirring by vibration. The amendment to claim 1 excludes the fluidized bed employed by Brehm et al.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the section 102(b) anticipation rejection of claim 1 based on Brehm et al.

At page 3 of the Action, claims "12 and 5" [believed to be 2 and 5] are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over Brehm et al.

Applicants submit that this rejection should be reconsidered and withdrawn for the same reasons that the section 102(b) rejection of claim 1 based on Brehm et al should be reconsidered and withdrawn. As discussed above, independent claim 2 has been amended in a manner similar to claim 1, and claim 5 has been amended to depend from claim 1.

At page 4 of the Action, claim 5 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over Berg et al (U.S. Patent 5,397,626) or Lahrman et al (U.S. Patent 5,149,334).

In the present Amendment, claim 5 has been amended to be a dependent claim, depending from claim 1. Claim 1 was not subject to the present rejection. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

At pages 4-5 of the Action, claim 3 is rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Brehm et al.

Applicants submit that this rejection should be reconsidered and withdrawn for at least the same reasons that the section 102(b) anticipation rejection of claim 1 based on Brehm et al should be reconsidered and withdrawn.

At pages 5-6 of the Action, claim 4 is rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Brehm et al in view of Potter (U.S. Patent 4,295,281).

Applicants submit that this rejection should be withdrawn for the same reasons that the section 102(b) anticipation rejection of claim 1 based on Brehm et al alone should be withdrawn. Potter does not make up for the deficiencies of Brehm et al.

In addition, Potter discloses that a fluidized bed for drying brown coal may be operated under pressure or vacuum (col. 3, lines 10-11). However, Potter does not appear to disclose or suggest that an air flow is generated under a reduced pressure. To the contrary, Potter teaches away from a reduced pressure condition by stating at column 3, lines 11-12 that operation at or near atmospheric pressure is preferred for reasons of economy. This is an independent reason why the combination of Brehm et al and Potter would not result in the present invention.

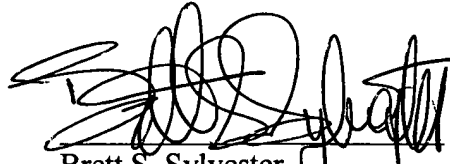
Reconsideration and withdrawal of the section 103 rejection of claim 4 based on Brehm et al in view of Potter are respectfully requested.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No.: 10/798,346

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brett S. Sylvester", written over a horizontal line.

Brett S. Sylvester
Registration No. 32,765

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: June 14, 2006